

## *Liothrips priesneri* sp. n., A Serious Pest of Avocado in Guatemala.

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Two previous *Liothrips* have been described from avocado, *Persea gratissima* Gaertn., in Central America, *L. avocadis*, (Hood, 1935) in Panama and *L. perseae* (Watson, 1923) in Honduras. The species described now is large and stout, like *perseae*; but Miss Kellie O'Neill has compared it with purported paratypes of *perseae* in the National Collection and, finding the paratypes undependable, advised that it should be described as new.

My attention was first drawn to the species early in July 1967 in a small orchard situated near Antigua, Guatemala, at about 5,000 ft elevation. At that time, the trees were heavily laden with immature fruit, and the rind of practically every fruit was marred by irregular, brown, scab-like areas, some of which were cracked deep enough to show the flesh of the fruit under the rind. Many adult thrips were crawling over the fruits and large numbers of nymphs were crowded in the scab-like areas and the cracks. Egg cases were also very abundant in the areas, but no viable eggs were found.

During a second visit, early in September 1967 about half the crop had been harvested, and of the avocados which remained on the trees, although most of them were scabby, only a few harbored nymphs or adult thrips. In contrast to the first visit, many adults were resting or crawling on the terminal shoots of the trees, and it appeared that they had been feeding on the tender leaf and flower buds, causing deformation of many and probably completely spoiling some.

The owner of the orchard stated that he had noticed scabby fruit and deformed buds during previous crops, and that recently he had also noticed the thrips on avocado trees in Guatemala City, 30 or 40 miles from Antigua. Later he collected and gave me several adults from that locality.

Description of the species follows. It is named in commemoration of Dr. Herman Priesner's 75th anniversary, and in grateful acknowledgment of his vast contributions to Thysanopterology and his unremitting kindness to all his colleagues.

### ***Liothrips priesneri* sp. n. (Fig. 1)**

Macropterous ♀: Distended, 3.5 to 4 mm long. Black, with major abdominal setae of segments 6 to 8 brown, and those of 9 and 10 light brown basally and clear distally. Antennal color variable; generally segments 1, 7 and 8 concolorous with body, 2 yellowish brown on outer side and distal end, 3 uniformly golden yellow, 4 yellow entirely clouded with black, 5

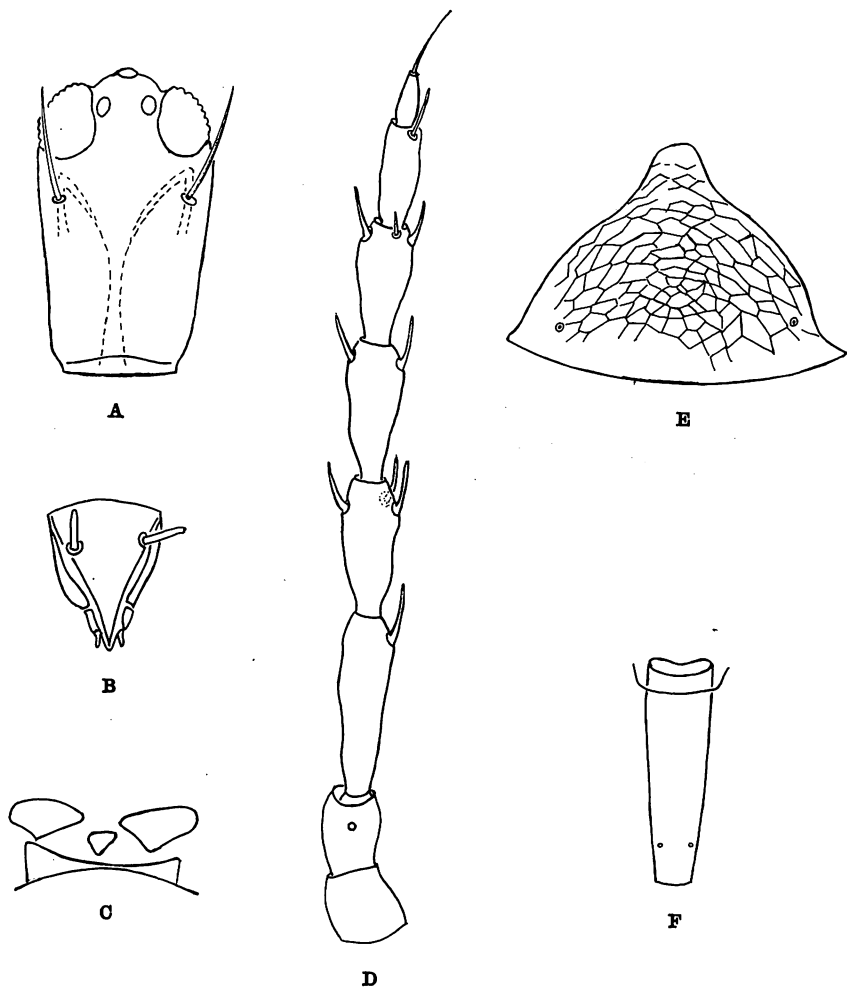


FIG 1. *Liothrips priesneri* sp. n. *Macropterous female*. A, dorsal view of head; B, ventral view of mouth parts; C, basisternal, propinasternal and mesopraesternal plates; D, dorsal view of right antenna; E, pelta; F, dorsal view of 10th abdominal segment.

yellow clouded in distal half, 6 nearly black except in basal fourth. Antennal shape as illustrated, about 1.4 as long as head; sense cones thin, pointed, about as long as antennal setae, which are pale and weak.

*Head*: about 1.7 as long as wide; sides straight, converging to sharply constricted base; eyes finely faceted, over  $1/3$  as long as cheeks, about the same ventrally as dorsally; post-ocular spine nearly 1.5 as long as eye, set  $1/2$  an eye length from the eye and nearer to cheek; vertex roundly swollen, reticularly striated, extending beyond anterior margin of eyes, bearing posterior ocelli close to the eyes and anterior ocellus overhanging the antennal

costa; mouth cone 0.4 as long as dorsum of head, roundly narrowed to distal 1/4th where it is more suddenly narrowed to pointed end, which is just attained by the labrum; stylets inserted nearly to the eyes and almost touching at the meson; striation of dorsum transverse, weaker medianly than basally or laterally.

*Forewings*: colorless except for brown basal setae and basal cloud which does not attain 3rd seta and fades medianly; with a series of 22 to 28 intercalary setae which do not attain the end of the wing. Basal setae slightly curved, tapered but open at the end, equidistant from each other on a thickened area of the wing which is distinctly scalloped along its inner margin; the median and distal setae subequal, from 0.115 to 0.138 mm long; the basal seta shortest, from 0.092 to 0.115 mm long. Hind wing with a median line from base to middle.

*Pronotum*: including membrane about 0.6 as long as head, over 1.5 as wide across epimera as in front, with variable short, inconspicuous median thickening, with transverse reticular striation only in front of each postangular seta and narrowly along posterior margin. Setae variable; antero-marginals, antero-angulars, and coxals relatively short, stiff, less than 0.5 as long as pronotum; mid-laterals longer, 0.5 as long as pronotum or more; postero-marginals and epimerals sub-equal, considerably longer than pronotum. Front legs somewhat thicker and shorter than hind and middle pair. Probasisternal plates narrowed towards the meson, widely separated, transversely striated. Prospinasternum small, triangular. Mesopraesternum extremely reduced in the middle.

*Mesonotum*: with long, narrow, transverse reticules. Metanotum with conspicuous, crowded, longitudinal reticules on the sides and distal 2/3; with faint, wide reticules on the disk between and cephalad of metanotal setae, which are thin and set a little less than their own length from the front margin.

*Abdomen*: relatively long, narrowed from the middle of segment 7 to base of tube. Pelta conspicuously reticulated, its blunt apex attaining the front margin of segment 1, its base 0.3 as wide as the segment. Ventrites 2 to 8 each with 20 microsetae in a transverse row near the middle. Tube as illustrated, 0.8 as long as head, its base less than 0.3 its length, its end 0.5 as wide as its base. Terminal setae, pale, thin, about as long as tube.

Measurements of ♀ (holotype) in mm: Head length 0.436, head width 0.249, eye length 0.114, postocular seta 0.166, pronotal plate length 0.176; pronotal width across epimera 0.395, anteromarginal setae 0.100, anteroangulars 0.075, mid-laterals 0.135; epimerals 0.210, postmarginals 0.200, coxals (paratype) 0.090, tube length 0.353, tube width at base 0.104, tube width at end 0.052.

Antennal segments (paratype):	1	2	3	4	5	6	7	8
Length ( $\mu$ ):	55	65	120	100	90	80	70	37
Width ( $\mu$ ):	50	40	35	40	35	35	35	15
Total length: 0.617 mm								

Macropterous ♂: Smaller than ♀ but like it in structure and color with the glandular area of sternite 8 small and indistinct.

Measurements of ♂ allotype in mm: Body length 2.54, head length 0.353, head width 0.228, eye length 0.104, pronotum length 0.145, pronotum width 0.343, tube length 0.291, basal tube width 0.093, distal tube width 0.052.

Antennal segments (paratype):	1	2	3	4	5	6	7	8
Length ( $\mu$ ):	50	60	125	105	100	75	65	40
Width ( $\mu$ ):	45	40	35	40	40	35	30	20
Total length: 0.620 mm								

Described from the ♀ holotype, the ♂ allotype, 11 ♀ and 1 ♂ paratypes collected on avocado bark and foliage, Guatemala City, June 1967 by Arturo Falla; and from 5 ♀ and 5 ♂ paratypes collected by the author from avocado fruit and foliage, finca "San Sebastian", Antigua, Guatemala on 2 September 1967. All the material is deposited in the collection of the Experiment Station, Hawaiian Sugar Planters' Association, Honolulu, except 1 ♂ and 1 ♀ paratypes deposited in the National Collection, Washington, D. C.

#### References

- Watson, J. R. 1923. University of Florida, Tech. Bull. 168: 80.  
 Hood, J. D. 1935. Proc. of the Biol. Soc. of Washington **48**: 97.